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LETTERS TO THE EDITOR

Letters intended for publication should be a maximum of 500 words and 10 references and should be sent to Simon Chapman, deputy editor, at the address given on the inside front cover. Those responding to articles or correspondence published in the journal should be received within six weeks of publication.

Occasional smoking in American college students

To the Editor – The US Centers for Disease Control and Prevention (CDC) recently changed their criteria for the prevalence of cigarette smoking to include some-days smokers who have smoked at least 100 cigarettes.[1] In the 1992 CDC survey, 22.1% reported everyday smoking and 4.4% some-days smoking. Similar rates were reported in Australia[2] and Canada.[3]

There is disagreement on whether occasional smokers are primarily a stable or transitory group. Shiffman[4,5] described a group of long term occasional smokers (chippers) recruited from newspaper advertisements; however, it is impossible to estimate what proportion of occasional smokers they represent. Evans *et al*[6] emphasised that many occasional smokers in the California tobacco survey were former regular smokers attempting to stop or cut down. However, Borland[2] pointed out that about half of the occasional smokers in the California survey had been occasional smokers a year previously.

We surveyed 768 college students (418 females and 350 males) and identified 143 daily smokers and 87 some-days smokers. Daily smokers had averaged 3.7 years of smoking and occasional smokers 1.5 years. The 87 some-days smokers were classified into three groups. Heavy some-days smokers (HSS) averaged from one to five cigarettes a day (the smoking requirements for chippers) and met the CDC inclusion requirement (at least 100 lifetime cigarettes). Light some-days smokers (LSS) averaged less then one cigarette a day, and met the CDC inclusion requirement. New some-days smokers (NSS) reported smoking less than 100 cigarettes. There were 34 HSS, 29 LSS, and 24 NSS. About three quarters of each group reported planning to quit within five years. The table shows situations in which each group reported smoking.

In the HSS, 26% reported feeling addicted to cigarettes compared to 3% of the LSS and 4% of the NSS; $\chi^2 = 9.67$, df = 2, $p = 0.008$.

Smoking duration varied between the three groups, $F(2,84) = 11.92$, $p < 0.0001$. As expected, the NSS had smoked the shortest period (1.0 years). Surprisingly, the LSS had smoked significantly longer (2.3 years) than the HSS (1.2 years). The proportion of former regular smokers was similar in the LSS (52%) and HSS (47%) groups. Perhaps averaging less than one cigarette a day enabled the LSS to remain longer as occasional smokers.

An evaluation of individual surveys identified two persons whose pattern of smoking matched Shiffman's description of chippers[4] (smoking at least two years, never a regular smoker, and rating oneself non-addicted), suggesting that this is not a common pattern in young smokers.

These results seem consistent with the view that some-days smoking (particularly HSS) is frequently a transitional state. Prospective studies would be helpful to document eventual smoking outcomes.

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5 Shiffman S, Fischer LB, Zettler-Segal M, Benowitz NL. Nicotine exposure among nondependent smokers. *Arch Gen Psychiatry* 1991; **47**: 333–6.
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Clean indoor air legislation in Australia

To the Editor – Readers of Professor McAllister's article on Australian public opinion on restricting smoking in public places[1] may be interested in an update on the legislation to which the author refers. The ACT Smoke-free Areas (Enclosed Public Places) Act was passed by the Legislative Assembly on 20 September 1994, with key provisions taking effect on 6 December 1994. It is the first (and to date, the only) Australian State or Territory law enacted expressly "to promote public health by reducing exposure to environmental tobacco smoke". The Act prohibits smoking in a wide range of enclosed public places, including restaurants, shops and shopping centres, educational institutions, business and trade premises, places of public meeting, buses and taxis, and sporting and recreational facilities. Proprietors are required to minimise smoke drift, to display no-smoking signs, and to ask a person to stop smoking in a smoking-prohibited area. It is also an offence for an individual to smoke in a no-smoking area.

The statement that "nothing in this Act shall be construed as creating or preserving the right of a person to smoke in an enclosed public place" is intended to give legal backing to proprietors wishing to extend non-smoking provision beyond the law's minimum requirements. The Act provides for breaches to be handled by prosecutions and the imposition of a fine, rather than through on-the-spot fines. Department of Health inspectors enforce the Act, largely by providing compliance advice and assistance to proprietors.

The Act reflects a number of political compromises. For example, it was originally proposed that restaurants be included among the types of premises to go smoke-free initially. This was rejected by a majority of the Assembly, which favoured a 12 month phase-in period, during which restaurants must provide a minimum of 50% of their dining area as non-smoking. The Act also sets a date for non-smoking in pubs, bars, and social clubs with liquor licenses, which is 30 months after the smoking prohibition applies to other premises.

Exemptions may be issued to restaurants (maximum of 25% smoking) and licensed premises (maximum of 50% smoking) that show that their air conditioning and ventilation equipment is sufficient to allow the premises to meet the current Australian Standard with regard to fresh air flow (AS1668.2). Standards Australia and environmental and occupational health and safety authorities expressed concern about this use of the standard. A majority of the Assembly, however, felt that an exemption system based on this criterion was an appropriate "harm minimisation" strategy. Many members felt that the evidence concerning the health effects of short term exposure to environmental tobacco smoke was not strong enough to warrant total bans and that the use of ventilation to minimise exposure was an acceptable, if imperfect, response. Businesses receiving exemptions will be advised that they still face legal liability for passive smoking related illness and conditions.

Public opinion of the type referred to by Professor McAllister was taken into account by the government in developing its proposals. An attitude survey of ACT residents also provided evidence of strong local support for smoking prohibitions.

Although the prevalence of smoking in the ACT is similar to that in Australia as a whole, the ACT may differ in several relevant respects: the population is highly educated, with a high average income; a large proportion of the workforce is employed by national or Territory government agencies, which have had a smoke-free workplace policy since the late 1980s; there is a relatively high incidence of asthma and respiratory ailments in the community; there is no local tobacco industry; and the previous leader of the Opposition (now the chief minister) is a pharmacist with a keen interest in health issues. While the tobacco industry actively opposed the legislation, organised objections to the legislation came primarily in the form of an expensive campaign by the

Percentage of heavy occasional smokers (HSS), light occasional smokers (LSS), and new occasional smokers (NSS) reporting smoking in various situations

Situation	HSS (n = 34)	LSS (n = 29)	NSS (n = 24)	Mean
Drinking alcohol	88	93	88	90
With smoking friends	82	79	71	78
After meals[a]	53	24	4	30
Studying	21	10	4	13
Watching TV	12	3	4	7

[a] Differences across smoking groups significant; $\chi^2 = 16.66$, df = 2, $p < 0.001$.

Australian Hotels Association, representing licensed premises and some restaurants. Information from Healthy Buildings International, an organisation with strong ties to the tobacco industry,[2] was much in evidence.

When the ACT Government proposed its legislation, it did so in the belief that it was only a matter of time before other jurisdictions would adopt a legislative basis for smoke-free public places. Whether, when, and how this happens will depend on the success of the Australian public health community in presenting the issues in a way that is informative and persuasive to the media, the public, and elected representatives.

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Adolescent use of cigarette vending machines

To the Editor – Public health officials have focused attention on the nature and extent of youth access to tobacco products in the United States.[1] Studies have clearly shown that minors can purchase cigarettes unfettered.[2] While model legislation calls for comprehensive measures to thwart youth access to tobacco,[3] many communities have initially focused on regulating cigarette vending machines.

Tobacco control advocates, as well as the tobacco industry and retailers, recognise that a small percentage of youth tobacco sales is through vending machines. However, vending machines should be cause for concern because of their ubiquitous nature.

A highly publicised mall intercept survey commissioned by the National Automatic Merchandising Association (NAMA) found that teenagers (13–17 years old) generally used over-the-counter sources for purchasing cigarettes.[4] Upon closer reading of the NAMA results, one sees that the younger the youth, the more likely will they be to use a cigarette vending machine. The survey showed that 13 year old smokers were 11 times more likely to use a vending machine than 17 year olds.

In the spring of 1993, more than 60000 students in grades seven, nine, and 12 (12–18 years old) participated in the Pennsylvania tobacco survey for students, which was conducted for the Pennsylvania Department of Health.[5] Using a 121 item self-completed questionnaire, administered in a classroom setting, this research aimed to collect baseline data about youth behaviour patterns and attitudes about cigarettes and smokeless tobacco. These students came from a stratified random sample of 371 public and non-public schools. Care was given to the proportional representation of the geographic, ethnic, gender, economic, and grade composition of the state. A total of 60778 students was surveyed, including a random sample of 55563 students and an oversampling of 5215 students in various target areas. After excluding the oversampled respondents and unusable questionnaires, the population on which our results are based is 54741 students.

Our study confirms the finding that the younger the adolescent, the more likely that they will use a cigarette vending machine rather than over-the-counter sources (that is, convenience stores, gas stations, supermarkets, or pharmacies). Seventh graders (12 to 13 year olds) were 2.2 times more likely to "perceive" vending machines as the easiest place to buy cigarettes than ninth graders (95% confidence interval [CI] = 2.1 to 2.3). Seventh graders were 6.6 times more likely to "perceive" vending machines as the easiest place to buy cigarettes than 12th graders (95% CI = 6.3 to 7.0).

When students were asked on a multiple response question where they actually bought cigarettes, the younger students were more likely to cite vending machines as a source. Seventh graders were 1.5 times more likely to buy cigarettes from a vending machine than ninth graders (95% CI = 1.4 to 1.7). Seventh graders were 2.6 times more likely to buy cigarettes from a vending machine than 12th graders (95% CI = 2.3 to 2.8). A Pearson's χ^2 test with one degree of freedom found each of these comparisons to be highly significant ($p \ll 0.001$).

While the overall volume of cigarette sales to minors from vending machines is much smaller than from over-the-counter sales, the younger, experimental smoker is at greater risk of purchasing from a cigarette vending machine. Tobacco control groups should be aware of this risk to such a vulnerable target audience and should adjust their educational programmes and policies accordingly.

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Son of *Premier*

To the Editor – In 1988, the RJ Reynolds Tobacco Company (RJR) introduced a unique cigarette product called *Premier*.[1] This product was unique because, unlike conventional cigarettes, *Premier* heated rather than burned tobacco, thereby significantly reducing tar yields. In October 1988, RJR began test marketing *Premier* in two American cities (Phoenix, Arizona, and St Louis, Missouri). However, it did not sell well in these cities and was removed from the market in February 1989.

The concept of a smokeless tobacco product, however, did not die with *Premier*. On 27 November 1994, a *New York Times* article revealed that RJR was testing a second generation of "smokeless cigarettes" called *Eclipse*.[2] Like *Premier*, *Eclipse* heats rather than burns tobacco, but is designed somewhat differently.[3] RJR has been conducting consumer tests of *Eclipse* in eight different American cities, including Buffalo, New York.[2]

One week after the *New York Times* story on *Eclipse*, we undertook an informal mall-intercept survey to determine consumer awareness of and interest in trying the "smokeless cigarette". We were curious to see how smokers perceived this product, and were interested to see if non-smokers might be induced to try smoking *Eclipse*.

Survey respondents were recruited by asking individuals at three shopping malls in Buffalo to participate in a 5 minute interview on cigarette smoking. Overall, interviews were completed with a convenience sample of 94 persons, including 26 smokers, 28 former smokers, and 40 individuals who had never smoked. Only two individuals who were approached to be interviewed refused participation in the survey. Because we were not sure to what extent persons would know about the *Eclipse* cigarette, interviewers were given a diagram of *Eclipse* to show to respondents. To help respondents understand the difference between *Eclipse* and a conventional cigarette, the diagram also listed several claims made about the product in the *New York Times* article (that is, reduce tar levels by 90%, eliminate 95% of secondhand smoke, produce less smoke, contain as much nicotine as a regular cigarette).[2]

Sixty percent of respondents stated that they had heard about the *Eclipse* cigarette. However, after showing respondents the diagram of *Eclipse*, it was apparent that most people were unfamiliar with the unique features of the product and how it differed from a conventional cigarette.

None of the never-smokers and former smokers we interviewed expressed interest in trying *Eclipse*. However, 85% of the smokers stated that they would be interested in trying the product. Respondents who expressed interest in trying *Eclipse* were asked to describe benefits they believed to be associated with the product. The most frequently mentioned benefits were less sidestream smoke and tar. All respondents were asked to describe potential problems associated with the *Eclipse* cigarette. The most often mentioned problems were addiction and disposal of the device.

The vast majority of respondents answered affirmatively to a question about whether *Eclipse* should be subjected to government testing for safety. However, when asked whether *Eclipse* should be sold alongside regular cigarettes or by prescription, 70% said the product should be available like cigarettes. Anecdotal comments received from respondents to our survey give us the impression that both smokers and non-smokers are sceptical about claims being made about the safety of *Eclipse* in relation to conventional cigarettes.

A recent study showed that about 70% of adult smokers in the United States want to stop smoking.[4] Most of those who do stop smoking do so out of concern for their health.